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REEXAMINING THE RELATIONSHIP BETWEEN
DIVIDED GOVERNMENT AND VOTER TURNOUT

by

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A thesis submitted in partial fulfillment of the requirements
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ABSTRACT

This thesis reexamines the effect of divided government on voter turnout originally posited by Franklin and Hirczy de Miño (1998), which suggested that each year of exposure to divided government resulted in a cumulative negative effect on voters leading to alienation and lower turnout. It reconsiders this argument using more recent data, given that voter turnout in U.S. presidential elections (as measured by the Voting Eligible Population) has increased since 2000, even though divided government has occurred during this period.

This thesis also uses new data and methods to address concerns about the original aggregate-level research design. The research question is tested at the individual-level of analysis to determine if divided government does interact with political trust to lower turnout. Previous research assumed this relationship since there is no aggregate-level proxy for political trust. By using survey data from the American National Election Studies it is now possible to test the full theory.

The aggregate-level models show that misspecifications in the research design of Franklin and Hirczy de Miño resulting in multicollinearity, and in two instances autocorrelation, which resulted in a failure to reject the null hypothesis. The individual-level models show that divided government interacts with low levels of political trust to increase voter turnout, falsifying the argument about the effect of divided government on turnout. Overall, the thesis suggests that the implications of an aspect of the American political system that renders it distinguishable from most other advanced-industrial democracies—divided party control of the executive and legislative branches—should be reassessed. More generally, the thesis demonstrates the importance of reevaluating hypotheses in political science with the most recent data and more robust methods in order to establish whether those original hypotheses are still supported.

Dedicated to my dear family and friends who supported me
on this journey with love and gratitude.

To my father Michael G. Beck

My late mother Marilyn L. Beck

My brother Jeremy L. Beck

My sister Elena Beck

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CHAPTER ONE: INTRODUCTION

In political science voter turnout and divided government are two areas which are often studied separately. A possible connection between the two diverse subjects was not considered until Franklin and Hirczy de Miño (1998) found divided government had a statistically significant negative effect on voter turnout in U.S. presidential elections. The effect was cumulative; for each year of divided government, turnout fell by 0.48% (Franklin and Hirczy de Miño 1998). While this effect may seem small, one half of a percentage point can be more than a million voters in U.S. general elections. In two prior replications newer Voting Eligible Population (VEP) data was used due to its increased accuracy and the effect was no longer found (Beck 2016a; Beck 2016b). The difference between the Voting Age Population data (VAP) the original authors used and the VEP may explain the different results (Beck 2016a). This thesis attempts to expand the understanding of the relationship between divided government and voter turnout using additional data and addressing concerns previous replications were unable to expand scholarly knowledge in this understudied subject area. By including midterm elections models, testing different versions of the divided government variable, and correcting and adding control variables a more complete picture of the effects of divided government will be gained. This study tests a hypothesis concerning the potential effects of divided government on voter turnout, and several models to test it – including separate aggregate models for presidential and midterm results. Furthermore, two new versions of the divided government variable will be used to account for different issues with the original coding in hopes of assuring the best possible models.

In addition to the aggregate-level models, this thesis will examine the relationship from an entirely new angle by introducing and testing an individual-level hypothesis. By using

individual-level data from the American National Election Study (ANES), the relationship between divided government and voter turnout will be examined in greater detail than is possible with aggregate models. By switching the unit of analysis, this study will present both the broad picture the aggregate-level models provide and a more detailed one in the form of the individual-level models. This is important because the aggregate models only show something is happening, but not necessarily why it is happening. The individual-level models will allow this thesis to address the “why” and investigate how divided government is affecting voter turnout. The individual-level portion of this research has separate hypothesis and multiple models, which will be discussed in more detail later.

This thesis fills a gap in the research by taking the research to the next logical step and providing a more in-depth analysis than the previous studies. The aggregate-level research will address questions and concerns with previous studies, while the individual-level work will address how the relationship works. Further, scholars in both areas have called for further research into unusual effects with at least one stopping just shy of calling for further research into this relationship (Rosenstone and Hansen 1993; Shugart 1995; Fiorina 2003; Geys 2006; Smets and van Ham 2013). As divided government has continued to be a common occurrence over the past 50-60 years, it will become necessary to consider potential effects on areas which were not previously thought to be related when divided government was only an occasional occurrence (Fiorina 1992; Shugart 1995). Thus, this thesis will attempt to answer prior calls for research by looking into this unusual effect, which may have been unimportant prior to divided government becoming so common. Further, since the findings of the original study are in doubt because of the replications, this thesis will shed light on whether there is an effect or if it was just a correlation supported by faulty data.

The following section of this chapter will focus on the theory and hypotheses. There will be separate subsections for the aggregate and individual-level hypotheses. Finally, there will be a section on expected findings, which shall also be split into aggregate and individual-level subsections.

Hypotheses

The United States has a bicameral legislature, a presidential system of government, and a two-party political system. This allows for a rather unique political situation where the government is either divided or unified. Divided government occurs when the presidency and at least one chamber of Congress are held by different parties, whereas under unified government both the presidency and Congress are held by the same party (Fiorina 1992). Divided government is studied from many different perspectives, often with conflicting findings. Scholars debate Congress's effectiveness in producing legislation (Coleman 1999; Fiorina 2003; Mayhew 2005). How divided government affects the time it takes to pass legislation, or the way power is shared in new laws (Hughes and Carlson 2015; Farhang and Yaver 2016). They study how it occurs – for example split-ticket voting or a weakened party system (Fiorina 1992; Sigalman, Wahlbeck, and Buell 1997; Fiorina 2003; Calcagno and Lopez 2010; Mulligan 2011). Research has even been done into unlikely areas divided government effects such as which party bares the blame for governmental failings, presidential approval ratings, and use of presidential signing statements (Nicholson and Segura 1999; Nicholson, Segura, and Woods 2002; Fiorina 2003; Kennedy 2014). There have even been calls for further study into the effects of divided government (Shugart 1995; Fiorina 2003). However, the only work done on a potential relationship between divided government and voter turnout is the original article by Franklin and Hirczy de Miño (1998), and two replications (Beck 2016a; Beck 2016b).

The authors of the original article hypothesized “[d]ivided government, by temporarily increasing the extent to which powers are separated, will reduce the motivations of voters to participate in subsequent elections” (Franklin and Hirczy de Miño 1998, pg. 316). Franklin and Hirczy de Miño (1998) determined: voters become alienated during divided government because they do not know which party to blame or reward for what has happened, but, because responsibility is clearer when the government is unified, turnout should stabilize. Unfortunately for the original authors, more recent research has found the opposite to be the case – divided government leads to the opposition being blamed for what ails society, which leads to positive results for the president’s party in elections and for the president’s approval rating – although they did not check for a relationship with voter turnout (Nicholson and Segura 1999; Nicholson, Segura, and Woods 2002). There is hardly a consensus though as Fiorina’s (2003) research supports Franklin and Hirczy de Miño’s (1998) blame theory. Additionally, the newer research still provides evidence that divided government can affect areas which may not be considered directly related – such as public opinion and voter choice. Something which can affect the party an individual chooses to vote for could easily also affect whether the individual votes. Exactly how divided government is related to decreased voter turnout requires additional explanation considering the newer research, which is where the individual-level research becomes vital.

Aggregate-Level Hypotheses

For this thesis there will be one aggregate-level hypothesis, which holds for all aggregate-level models. This hypothesis follows the spirit of Franklin and Hirczy de Miño’s (1998) hypothesis, though not the wording. The first hypothesis is:

H1: Increasing years of divided government will have a cumulative negative effect on U.S. voter turnout in national elections.

While the results for presidential and midterm models may vary, the hypothesized effect is the same. The midterm model is expected to show a stronger effect than the presidential model due to greater variation in their data. In fact, previous research has suggested the presidential models will be insignificant due to changing from Voting Age Population (VAP) data to Voting Eligible Population (VEP) data (Beck 2016a; Beck 2016b). The VAP data, commonly used at the time of the original study, has a decades' long disturbingly low turnout trend. McDonald and Popkin (2001) noticed this trend and attacked the question from a new angle. They created the VEP data set, which removes several segments of the population who are ineligible to vote. This change meant the low trend in their data was less dramatic than in the VAP data. While there is not a large difference between VAP and VEP turnout numbers, there is enough of a change that some previous relationships are no longer significant when VEP data is used instead of VAP. Considering this switch in data voter turnout will be defined as the percent of the eligible voting population who participated in a given election. Further the changes in coding of the divided government variable may affect the models as well. Franklin and Hirczy de Miño's (1998) coding only accounted for if the government was divided or not, and for how many years during their 12-year period. This thesis will add a model using a stricter definition of divided government. This definition of divided government only counts periods when both chambers of Congress are held by the opposite party than the presidency. By tightening the definition this should increase variation and account for differences in congressional behavior the original coding did not.

Individual-Level Hypotheses

This thesis is extending the aggregate-level research to its logical extent. There are still certain questions which cannot be answered due to data unavailability at the aggregate-level. This thesis will include an individual-level section to address these questions. The American National Election Study (ANES) has a wealth of individual-level information about voter alienation in the form of questions regarding trust in government and voting behaviors, which have previously been combined with a specially coded divided government variable as well (Nicholson, Segura, and Wood 2002). Up until now, Franklin and Hirczy de Miño's (1998) theory and relationship have only been tested at the aggregate-level, but the ANES supplies most of the data necessary to test this theory from the individual-level as well. The theory at its heart has always lent itself to individual-level study – divided government alienates voters, so they do not turn out to vote, making this an individual-level argument rather than an aggregate one. Voter alienation is not something which can easily be tested at the aggregate-level, so alienation remained the invisible untested force in the previous aggregate-level research. This thesis proposes to investigate the theory by testing an individual-level hypothesis as well as the aggregate-level one.

The individual-level hypothesis will test the relationship between divided government and voter turnout. By including a measure of trust in government (a common proxy for alienation), it is possible to test the whole theory, which may yield results the aggregate-level results do not. As expressed earlier, it is important to have a model that conforms to the Franklin and Hirczy de Miño (1998) hypothesis, at least to a certain degree to provide continuity between sections. The hypothesis is:

H2: In a study of individuals, the presence of divided government will have a negative effect on voter turnout.

The effects of a divided government and voter alienation on voter turnout will be further tested by interacting the divided government and trust in government variables in an additional model. This will provide additional information about the relationship between divided government and voter turnout.

Expected Findings

This thesis will be approaching the research question using new data to discover the extent of the relationship between divided government and voter turnout at the aggregate-level, and from a new direction at the individual-level to test the full theory. The expected findings listed below express the ideal results. The first subsection presents the aggregate-level expected findings, and the second presents the individual-level expected findings.

Aggregate-Level Expected Findings

EF 1: Divided government will have a statistically significant negative effect on voter turnout in presidential elections. Specifically, by correcting problems with the model, a significant effect should be found. Further, the new divided government variables should outperform the original variable for this effect, since the new variables correct potential issues with the way the original variable was coded.

EF 2: Divided government will have a statistically significant negative effect on voter turnout in midterm elections. Since midterm elections voter turnout appears to vary more, and midterm elections are considered different than presidential ones in many ways, this makes it more likely

to find an effect. Additionally, because midterm elections have consistently lower turnout, the effect of divided government should be more pronounced.

EF 3: The election laws variable will continue to have a large statistically significant negative effect on voter turnout. By correcting the coding of the election laws variable to account for changes in national election laws since 1916, the improved accuracy should result in a continued effect, while relieving concerns it may have been measuring other effects such as the passage of time or changes in media availability. This effect may be tempered by the addition of the media effects variable but is expected to continue to outperform the other variables.

EF 4: Media effects will have a statistically significant negative effect on voter turnout. This variable was added to address concerns about whether the election laws variable was measuring what it was election laws or if it was capturing the effect of changes in media technology such as the syndicated newspaper and radio which occurred close to the same time as the election laws variable changes. It is reasonable to expect that the increased access to information should result in changes in voter behavior. Further, if the original theory that exposure to divided government results in voter alienation and lower voter turnout is accurate, then increased exposure to news media should have a negative effect on voter turnout.

Individual-Level Expected Findings

EF 5: Divided government will have a statistically significant negative effect on voter turnout. The relationship between divided government and voter turnout should be found in the individual-level model as well. The theory has always had an individual-level component, and the ability to test the theory at the individual-level with a large dataset should yield support for the theory.

EF 6: The interaction between divided government and political trust will have a statistically significant negative effect on voter turnout. By interacting the independent variables, the relationship will be tested in full for the first time. This will provide a complete picture of the relationship between the variables allowing for further interpretation of the theory.

CHAPTER TWO: PRIOR LITERATURE

Divided Government And Voter Turnout Literature

As with any good replication or update, the original research informs the direction of any new research to a great extent. Since the original article by Franklin and Hirczy de Miño (1998) has only been replicated twice, and no further work on the topic is known at this time, it has an even stronger effect on the literature review as the first piece to study a connection between two oft studied areas (Beck 2016a; 2016b). In their research, Franklin and Hirczy de Miño (1998) found a negative effect of 0.48% per year of divided government. This effect was cumulative, which meant if the government was divided during a president's entire term, turnout could be depressed by almost 2% (Franklin and Hirczy de Miño 1998). This might not seem like a large amount except 2% of the eligible American population was approximately 4,449,482¹ voters in the 2012 presidential election (McDonald 2016). Additionally, divided government has become increasingly common in recent decades making even a negative two percent reduction in turnout especially concerning during a period of lower turnout (Fiorina 1992; Rosenstone and Hansen 1993; Mayhew 2005). The first replication set forth to find out if the effect had changed during the twenty-year period following the end of the original dataset, but one seemingly simple change to the dataset had unexpected results (Beck 2016b). In the period between publication of the original article and the start of research for the replication, two developments occurred: first none of the original data sources had been updated, which meant a new dataset would have to be built from new sources; and second more accurate source of voter turnout data called Voter Eligible Population (VEP) data had been introduced by McDonald and Popkin (2001)². The

¹ Calculated using Voting Eligible Population total for the 2012 election provided by McDonald (2016).

² A more complete explanation of the data shall be provided later in this chapter.

result of the first replication with its new extended dataset was a complete loss of the significance of the divided government variable and a coefficient of less than half of Franklin and Hirczy de Miño's finding (1998) (Beck 2016b). The reason for this unexpected finding was beyond the original scope of the paper, meaning rather than bolstering the original results, the first replication raised many new questions. A conference paper focused on the two most likely reasons for the change: the additional twenty years of data and the use of VEP data (Beck 2016a). When two models using the new VEP data and the voting age population (VAP) data were compared, Beck (2016a) found the change in voter data drove the loss of statistical significance. The conference paper still left some unanswered questions regarding coding of other variables, the archaic time-series methods used, and the level of measurement. While this is the extent of the available research on the relationship between divided government and voter turnout, there is research on both areas separately.

Divided Government Literature

What is divided government? According to Fiorina (1992), divided government occurs when one or both chambers of Congress are held by a different political party than the presidency. This results in an ideological separation between the majority party in at least one chamber of Congress and the presidency. Once less common, divided government has attracted a variety of attention due to an increase in occurrence in recent decades to the extent Fiorina (1992) even refers to it being considered "normal" now (Mayhew 2005). How does divided government occur? Potential reasons for this increase include the weakening of the party system, polarization, and a national preference to prevent one party from having too much power (Fiorina 1992; Leonard 1991; Shugart 1995). Split-ticket voting is thought to be one reason divided government occurs. Essentially split-ticket voters vote for members of different parties

for different offices (Fiorina 1992). This is thought to be caused by partisan ambivalence, the weakening of the party system, or possibly economic self-interest at the state level (Fiorina 1992; Rosenstone and Hansen 1993; Mulligan 2011; Calcagno and Lopez 2010). Alternatively, split-ticket voting has also been attributed to voters trying to assure more moderate policy results than either party offers by forcing politicians to compromise (Shugart 1995; Fiorina 2003). There is some debate on the topic as, for example, other research found split-ticket voting is not directly related to a preference for divided government (Sigelman, Wahlbeck, and Buell 1997). Interestingly several potential causes of divided government are also related to decreased voter turnout, as will be shown later in this section.

What does divided government effect? Much of the research on divided government focuses on divided government's effect on political phenomena. The first example is the most obvious: divided government affects how much Congress accomplishes. Coleman (1999) found divided government does not get as much done as unified government does. Mayhew (2005), however, found divided government to be just as efficient as unified government. Even in the area of congressional investigations there were no substantial differences (Mayhew 2005). Though Mayhew (2005) found divided government to accomplish just as much as unified, the fact that divided government was viewed as negative and antagonistic by several of the scholars he cited suggests a negative perception of divided government is rather strongly held. Coleman's (1999) research was in response to an earlier edition of Mayhew's (2005) book. He acknowledged the research in the field that showed divided government could be productive, but argued the difference in the amount of significant legislation passed has to be considered (Coleman 1999). Fiorina (2003) did discuss a scholarly debate on the effectiveness of divided government concerning the importance of quality legislation instead of just quantity as well – an argument

intended to critique Mayhew's (2005) dataset, though Fiorina did side with Mayhew's work. However, Hughes and Carlson (2015) found divided government leads to delays for important legislation. Further, this delay is affected by the strength of the president's party in Congress (essentially the level of division), and how polarized the parties are (moderate to high polarization interacts with the strength of the president's party leading to delays) (Hughes and Carlson 2015). In essence, what the researcher prioritizes when measuring the effects of divided government can have a great effect on the results. Divided government even affects how Congress structures the policy implementation section of a bill (Farhang and Yaver 2016). Farhang and Yaver (2016) found during periods of divided government, Congress is more likely to fragment policy so several different sections of government are in charge of part of a single piece of legislation – occasionally even designating more than one department jurisdiction over a single area. This tendency to fragment policy increases when the majority is uncertain if it will retain power after the next election (Farhang and Yaver 2016). Additionally, divided government may influence the president's use of vetoes – with some presidents being more likely to use vetoes when the government was divided (Fiorina 2003). Kennedy (2014) found presidents are more likely to use signing statements during divided government, potentially as a final effort to bring the legislation more in line with their own policies or prevent Congress from encroaching on presidential authority when the opposition has enough support to override a veto. The use of these statements increases when the opposition majority is unified in Congress (i.e. the majority in both chambers is held by the same party as the presidency) (Kennedy 2014). So, while Mayhew (2005) found that a divided government can be efficient, divided government has still been found to complicate several aspects of the legislative process.

How does divided government relate to voting? In addition to the previously mentioned connections, divided government has been found to have one effect directly on voting. Divided government will lead the voters to blame the opposition party for anything which ails society and reward the president's party with votes during the next election (Nicholson and Segura 1999). In unified government the president's party receives all the blame (Nicholson and Segura 1999). This ability to share the blame with the opposition party even leads to higher approval ratings for the president as well (Nicholson, Segura, and Woods 2002). Other research has suggested divided government leads to problems assigning blame due to the president and the opposition in Congress playing a blame game – the president blaming Congress for torpedoing legislation he backed and the congressional opposition accusing the president of not leading (Fiorina 2003). This blame game could leave voters confused about whom to believe (Fiorina 2003). While it may not seem likely the effect of divided government on “blame” and vote choice are related to voter turnout, it does suggest that some voters may internalize the effects of divided government and change their voting behavior because of it. If divided government can affect one aspect of behavior it is not inconceivable for it to affect other aspects – in this case voter turnout.

Voter Turnout Literature

Voting has been described as one of the most basic forms of political participation, and the most common (Dalton 2013). Inevitably, when a steady decline in voter turnout was noticed in the VAP data, it inspired further research. The study by Rosenstone and Hansen (1993) is perhaps the most comprehensive attempt at studying the change in voter turnout. They approached the decline like a puzzle – looking at several different causes instead of trying to find a single explanation for the change. They found changes in areas such as party mobilization efforts and voter registration laws to be part of the problem, but the effects did vary (Rosenstone

and Hansen 1993). For example, the 1965 Voting Rights Act could be described as a registration law, which had a positive effect on turnout whereas other registration laws had negative effects (Rosenstone and Hansen 1993). Further, all attempts to “loosen” voting restrictions do not have the same effect. For example, the 26th amendment, which gave 18-year olds the right to vote, did not have as positive an effect as prior suffrage laws due to the sudden increase in younger voters, which caused turnout to drop significantly (Rosenstone and Hansen 1993). According to Dalton (2003), less than half of voters under the age of 24 participated in the 2004 election. Dalton (2003) finds the younger demographic chooses to participate in other political activities, such as protests or volunteering. This thesis would be addressing Rosenstone and Hansen’s (1993) puzzle from an unusual direction, since division or unity of government is so rarely considered in the voter turnout literature.

Of course, there is alternative argument about the decline in turnout – the decline is partially the result of problematic data. McDonald and Popkin’s (2001) research showed the low turnout trend to be less severe than originally thought. They found the prevalent VAP data included people who were ineligible to vote which overinflated the number of potential voters, so the portion of actual voters looked smaller in comparison (McDonald and Popkin 2001). They introduced VEP data as a solution to the VAP data’s inaccuracies, since it excludes certain ineligible groups and includes eligible voters that the VAP data left out (McDonald and Popkin 2001). McDonald (2002) has made further attempts to make VEP data more easily attainable by releasing instructions on how to calculate state-level VEP data easily. Other authors have examined how VEP and VAP data behaves at the state-level and found the VAP turnout levels to still be artificially low, though the difference varies by state (Holbrok and Heidbreder 2010). Similar data has been used in models to see how a variety of national-level issues effect state-

level voter turnout in midterm and presidential elections (Ragsdale and Rusk 2011). The state-level variation is important, because it provides an example of the loss of clarity when measuring at the aggregate-level. This thesis will address this problem by including the individual-level models with the goal of providing the most accurate picture of the effect possible. Despite all of this impressive research, this is still an area requiring further study. This thesis will attempt to add to the body of literature.

The prior literature in this section provides a starting point for this project, but it also shows some of the challenges that come with researching these areas separately. This thesis will be combining these areas while taking steps to properly address these challenges. Testing both at the aggregate and individual levels is merely one of several responses that will be further discussed in the following chapters.

CHAPTER THREE: AGGREGATE-LEVEL METHODOLOGY AND FINDINGS

Aggregate-Level Methodology

The first challenge for the aggregate-level research is the dataset. The sources for Franklin and Hirczy de Miño's (1998) data have not been updated since their article was released, and their dataset is unavailable. I created a dataset for the earlier replications that followed the original authors' coding relatively closely, with the major exception of changing the source of voter turnout data from Voting Age Population (VAP) data to the Voting Eligible Population (VEP) data (Beck 2016b). Two new datasets were created based on the previous dataset with additional data and variables. In this chapter several changes are being made to the dataset, including:

- The addition of a midterm election version of the dataset. The previous versions of the dataset only included voter turnout data from presidential elections. This thesis will test the relationship between voter turnout and divided government during midterm elections for the first time.
- Two new versions of the divided government variable are included to address measurement concerns. One of the new variables will measure four-year intervals instead of the original 12-year intervals due to concerns that 12 years is too long of a period for an individual to be affected by an event like divided government. The second will use a stricter definition of divided government than the original variable by only counting years where both chambers of Congress are held by a different party than the presidency as divided instead of counting years where at least one chamber of Congress was held by the opposition party.

- Changes and additions to the control variables, which were a cause of concern in earlier research (Beck 2016a; Beck 2016b). Specifically addressing concerns regarding the Election Laws variable by recoding it to include additional laws since the scope of the original variable was very limited. The media effects variable was added to address concerns that the election laws variable was measuring changes in media technology and access as well.
- Additionally, the models will be tested for autocorrelation. Previous versions relied on a lagged time control to account for time series issues. Lagged turnout variables are considered insufficient time controls as they are prone to the autocorrelation they are supposed to prevent.

Following the research design of Franklin and Hirczy de Miño (1998), the method being used to test the models will be linear regression, though stricter two-tailed significance tests will be used instead of the original one-tailed tests. Multiple models are required due to the addition of different versions of the divided government dependent variable in the presidential-level data in addition to the midterm election models. For the sake of comparison with the original article, a lagged voter turnout variable will be used as a time control for autocorrelation, as well as a more appropriate Durbin's H test for autocorrelation. The goal of this chapter is not just to test the relationship between divided government and voter turnout, but also to assess the aggregate research design for time series and other errors that may be found in the models.

Aggregate Variables

The dependent variable is *Voter Turnout*, although separate versions must be coded for the presidential and midterm models. The data for this variable are from McDonald's (2016) website, which provides national-level VEP data for all U.S. presidential and midterm elections.

Unfortunately, the earliest turnout data available is potentially problematic due to inaccurate sources (McDonald 2016). Additionally, Franklin and Hirczy de Miño (1998) questioned the use of data before 1830 because the U.S. party system was still developing, and they felt the parties were not distinct enough to get the full effect of divided government yet. A quick review of the U.S. House (N.D.) website suggests Franklin and Hirczy de Miño's (1998) concerns about the party system prior to 1830 may be valid, and a consistent, definitive difference in party opinions would be needed for the divided government variable to have the theorized effect of alienating voters. Further, the 12-year retrospective divided government variable prevents the full dataset from being used as well. Since the variable counts the previous 12 years of division, the dataset's first case is 12 years after the party system started to solidify according to Franklin and Hirczy de Miño's (1998) research design. For the presidential election model, the variable will include elections from 1840 to 2016 with a total of 45 cases, and the midterm election model will include the elections from 1842 to 2014 with a total of 44 cases. The coding of these variables is simply the percentage of the voting eligible population who voted in the election. Given the existing problems with the dataset that are being addressed extending the dataset by adding unreliable and problematic data is an unnecessary risk. Additionally, a VAP model replicating Franklin and Hirczy de Miño's (1998) model will be included for the sake of comparison. The VAP model uses data from Woolley and Peter's (2018) American Presidency Project, which consists of 44 cases from 1840 to 2012.

The independent variable of interest is *Divided Government*. The first two versions of the variable are based on the same definition of divided government. Divided government is defined as a period when the presidency is held by one political party and at least one chamber of Congress is held by the other party. This variable is coded by counting how many years the

government was divided prior to the election in question, and the total number becomes the value for that year. The number of prior years counted varies for the first two variables. The data for all the divided government variables comes from comparing presidential election results to lists maintained by the U.S. House (N.D.) and U.S. Senate (N.D.) to determine: first, which party was in control of the presidency, House, and Senate during a given time; and second, whether the government was divided or unified during that period. The presidential partisanship data came from Cronin and Genovese (2010) for the years 1830 to 2008, and the 2012 and 2016 results from the Federal Election Commission (FEC 2013; FEC 2017).

Divided Government (Original) counts the years the government was divided over a 12-year period prior to each election. This is, to my understanding, how Franklin and Hirczy de Miño's (1998) coded it, but they only provide a cursory explanation of the coding and the only reasoning for the twelve-year retrospective nature of the variable is there was one 12-year long period of divided government (Franklin and Hirczy de Miño 1998).³ A four-year retrospective divided government variable will be included to address concerns the 12-year timespan of the original coding is too long. These concerns were raised by a discussant during the presentation of the second replication at the Midwest Political Science Association Conference in 2016, who pointed out 12 years is a long time for an individual to be affected by something (Beck 2016a).

Divided Government (Four Year) will be coded in the same manner as the 12-year version: by counting the instances of divided government during the four years prior to an election. The theory is the shorter time span might produce different results and show a more accurate effect than the 12-year period. Franklin and Hirczy de Miño's (1998) theory stated that voters become ambivalent and are less likely to vote because of exposure to divided government

³ I have been unable to find a single period of divided government longer than 10 years in any recoding of divided government, and question whether this was the result of error or an issue with their source.

over the years prior to the election. This variable will show the effect of comparatively recent exposure to divided government – a period recent enough the events would be fresh in voters’ memory. Further, this also alleviates concerns with the inability to control for the voters’ age. The original coding did not account for the fact that voters under 30, and especially under 25, were unlikely to be politically active or aware of whether the government was divided or unified when they were children or young teenagers. By coding only the previous four years this issue can be mostly avoided, since an aggregate-level age control variable for the entire period of the dataset would be difficult to accurately create.

A third coding of divided government is included to account for concerns the original variable was defined too broadly. The original coding of the variable counts any instance the government is divided regardless of whether it is one chamber or both chambers of Congress held by a different part than the presidency. This was deemed problematic by a member of the thesis committee since there could be a variation in the effect of a one chamber opposition versus both chambers being in opposition to the president and his party.⁴ In light of Hughes and Carlson’s (2015) research, which shows divided government to have a varying effect depending on how many seats the president’s party controls and given the limitations of the data, including a model with a stricter interpretation of divided government could be beneficial. To address this concern, a new version of the 12-year retrospective divided government variable will be created. The new variable only counts periods when both chambers of Congress were held by the opposition party during the previous 12-years as divided government. The variable will be called *Divided Government (Dual House)*.

⁴ For example, a Republican Presidency and House with a Democratic Senate may behave differently than a Republican Presidency and a Democratic House and Senate might.

The first control variable is *Election Laws*. Franklin and Hirczy de Miño (1998) designed this variable to capture a tightening of election laws from 1900 to 1916 when concerns about voter fraud became a political issue. This coding only accounts for negative changes in election laws over a 16-year period but does not account for the potentially positive effects of women and minorities gaining the right to vote (Ragsdale and Rusk 2011; Rosenstone and Hansen 1993). Interestingly, the chart Franklin and Hirczy de Miño (1998) provide as evidence to support the need for this control variable shows spikes in voter turnout during the periods when women and minorities gained the right to vote. The new coding of the variable will include these positive changes in election law. The election laws variable will be coded as a “0” from 1840 to 1900 due to the minimal voting laws during the period, then it will gain 0.20 every 4 years until it becomes a “1” in 1916 to reflect the rapid introduction of registration laws during those years, before dropping to 0.80 in 1920 when women gain the right to vote, and will drop again in 1966 to 0.60 to reflect the Voting Rights Act of 1965 and will remain at 0.60 for the remainder of the dataset. The theory is additional registration laws shrink the pool of eligible voters, and expanded suffrage increases the pool of eligible voters and that these changes would then affect voter turnout (Rosenstone and Hansen 1993). Franklin and Hirczy de Miño (1998) were only concerned with the increased restrictions to voting, but arguably the addition of large groups of eligible voters could influence voter turnout which should be addressed by the control variable. Specifically, both women’s and minority suffrage had positive effects on voter turnout according to Rosenstone and Hansen (1993), which could mask the effects of divided government on voter turnout if left unaddressed. While this variable is still not as precise as one would hope, a search for a source with better coding turned up fruitless, and due to the national-level analysis being used, state-level changes in election law would be inappropriate to include. Additionally, the 26th

amendment, which gave 18-year-olds the right to vote, did not result in a substantial change in voter turnout like the other instances of increased voter turnout, so it will not be included in this variable because of its anomalous nature (Rosenstone and Hansen 1993).

Franklin and Hirczy de Miño's (1998) second control variable was *Closeness of the Election*, because the authors' believed closer elections may influence voter turnout levels, since tighter, more competitive races attract more voters to the polls (Franklin 2004; Geys 2006). Closeness of the election is coded as the difference in the percent of votes received by the top two presidential candidates in an election. In Franklin and Hirczy de Miño's (1998) research, they capped the variable at 18%, but excluding anything over 18% makes little sense when there are only five excluded cases and the highest percent difference was 26.4%. Also, with so few cases in the aggregate models any missing data is problematic. The data comes from Cronin and Genovese (2010) for the 1840 to 2008 elections, and the FEC (2013; 2017) for the 2012 and 2016 elections. There is no midterm election proxy for this variable, so it will only appear in the presidential models.

In this thesis, a third control variable will be included in some models. *Media Effects* captures changes in the flow of information as access and availability of media and technology changed. The coding is similar to that of the election laws variable: where the case number increases by 0.20 whenever a change occurs. The variable starts at "0" in 1840, gains "0.20" in 1852 to reflect the invention and use of the telegraph, becomes "0.04" in 1888 to reflect the Pulitzer and Hearst newspaper effect, grows to "0.60" in 1920 when radio news broadcasts begin, is "0.80" in 1948 to reflect the growth of televised broadcast news, increases to "1" in 1980 to capture the CNN 24 hour news effect, and finally becomes "1.20" in 1996 to capture the launch of internet news websites where the variable will remain (Gross 1999; Stephens N.D.;

Vaughn ed. 2008; NYFA 2015; Wild 2016). The sources for these dates come from journalism encyclopedias and university articles and websites, but exact dates were sometimes difficult to determine, and all dates are rounded up to the nearest presidential or midterm election year. The reason for the issue with dating comes from delays between the inventions of technology and when the media began using it. For example, Samuel Morse invented the telegraph a decade before the technology was used by the newspaper industry to transmit reports across country for printing in local papers (Library of Congress N.D.; Gross 1999). Televised news was a particular challenge because technically news was broadcast on television in the early 1940s, but only to the very limited area of New York (Stephens N.D.; NYFA 2015; Wild 2016). It was not until the late 1940s and early 1950s that televised news was readily available to a large enough portion of the country to have an impact at an aggregate level. 1948 is considered the best starting point in this scenario because of the number of television stations and the debut of Meet the Press a year earlier (Stephens N.D.; NYFA 2015; Wild 2016).

The media effects variable is being added due to concerns the election laws variable is picking up more than just changes in election laws. Changes in media technology was suggested as a top contender for possible overlapping effects by a discussant during the 2015 Florida Political Science Association Conference because there is an overlap between the dates when the election laws change and the dates when the media adopted new technology (Beck 2016b). The issue is both variables could be capturing other effects as well, but what effects and how to measure them is the problem. Even if other potential control variable were identified the 176-year timeline makes it difficult to find reliable aggregate-level source material. The media effects variable is based on sources from the journalism field, though there are studies on the effects of news media on political issues as well. Notably the book by Iyengar and Kinder (2010) about

experiments conducted to assess the effects of television news on voting age adults that found some evidence of media effects. Research by Drew and Weaver (2006) indicates exposure to media, such as newspapers, radio, or televised news, may be related to a voter's intention to vote, campaign interest, or knowledge. Miller and Krosnik's (2000) research suggests news coverage of an issue impacts how politically knowledgeable individuals judge the importance of the issue and the president's response to it – results which echo Iyengar, Peters, and Kinder's (1993) findings on the same topic. A study by Dalton, Beck, and Huckfeldt (1998) found newspaper editorials favoring one presidential candidate over another lead readers to favor the candidate by a small, but significant, margin. To put it simply: there is evidence the media affects voters in certain contexts in modern studies. The challenge is there is no way to know if media affected voters in 1850 the same way: one can only generalize based on the existing research. This variable is included as much to check the election laws variable as to assess any potential effects of the media. This is a very basic coding and rather preliminary indicator, which is solely intended to see if concerns about what the election laws variable is capturing could warrant further study.

Presidential Election Models

The aggregate-level presidential election models will be presented in this section. Table 1 will include a Voting Age Population (VAP) replication which mimics Franklin and Hirczy de Miño's (1998) research model, and then three VEP replications with the three different versions of the divided government variable. Table 2 will include two versions of divided government with the addition of the media effects variable. The Models were split between the two tables for readability and to prevent confusion when comparisons are made between models.

The first model is a VAP replication of Franklin and Hirczy de Miño's (1998) results using data from the second replication (Beck 2016a). The VAP replication is only extended to 2012 because the source for the VAP data has not been updated. The coding for election laws in this model is the same as the original authors' coding, though closeness of the election is coded the same across all models. At first glance, divided government appears to be insignificant, but it should be noted the table is presented using two-tailed significance tests instead of one-tailed tests like Franklin and Hirczy de Miño (1998) used. If the model used a one-tailed significance test, it would have been statistically significant at the $p < 0.10$ level, and the null hypothesis could be rejected, but with the change to a stricter two-tailed test that is no longer the case. The coefficient for divided government (original) is slightly smaller than in Franklin and Hirczy de Miño's (1998) model at -0.37% instead of -0.48%, which is likely due to the differences in the datasets. Franklin and Hirczy de Miño's (1998) data sources have not been updated since the article was published, so new sources had to be used to extend the dataset through 2012 (Beck 2016b). Second, this model includes the 1996 to 2012 election where the original article's model ended at 1992. Additionally, a slight change was made to the coding of the closeness of the election variable. Franklin and Hirczy de Miño (1998) chose to exclude the five elections with a vote difference of more than 18%, and further limiting the dataset by coding five cases as missing over a difference of less than eight percentage points seemed counterproductive (Beck 2016b). Election laws are highly significant with a coefficient of -13.72%, and closeness of the election fails to achieve statistical significance in this model.

The second model uses the divided government (original) version of the variable and is a full VEP replication through 2016. The results of this model were unexpected. Divided government was statistically significant at the $p < 0.05$ level in a two-tailed t-test, and I can reject the null

hypothesis. In this model, divided government (original) also has a larger effect than previously found at -0.51% per year of division. This model uses the new coding of the election laws variable as well, and it is highly significant at -19.10%, which is comparable to earlier replications despite the changes in coding (Beck 2016a, 2016b). Closeness of the election failed to achieve significance in this model though the coefficient was in line with prior replications (Beck 2016a, 2016b). These results are important because this is the first-time divided government has been statistically significant in a replication with the stricter significance levels and using the more accurate VEP data.

The third model used the divided government (dual house) version of the variable. The results for this variable come with a caveat – the stricter coding resulted in a severe positive skew in the distribution of the data that resisted all attempts at correction. Due to the skew, at this point, the dual house results should be taken lightly. Divided government (dual house) is highly statistically significant with an effect of -0.79% per year. Technically I should reject the null hypothesis given the results, but I hesitate to do so with the skew of the data. Election laws is once again highly significant at -18.68%, and closeness of the election is statistically significant at -0.19%. While the consistency between this model and the last is positive, there is simply not enough data to correct the skewed distribution currently. Unfortunately, due to the severe positive skew, the divided government (dual house) version is extremely flawed, so I will be excluding it from the remainder of the models in this chapter to avoid confusion. The results were interesting enough in the context of future research directions to include one model, but the rest of the chapter will focus on the more promising versions of the variable.

The fourth model uses the divided government (four year) version of the variable. Interestingly, the four-year coding shows a larger effect than the original 12-year coding.

Divided government (four year) is statistically significant at -0.99% per year, thus I can reject the null hypothesis. The election laws variable is highly statistically significant at -17.98%, and closeness of the election is not significant. This is the best performance of divided government in a model yet, due to the high significance level. The results are in line with the theory that lead to the inclusion of this variable: four years appears to be a more reasonable time frame for a voter to be affected by a political phenomenon than 12-years. The effect of divided government appears to be stronger in the short term.

The media effects models can be found in Table 2. The first model does show signs of multicollinearity, but the second model shows results more in line with the previous models. While multicollinearity is often considered a negative, in this case, if it is resulting from election laws and media effects overlapping, that would be confirmation the election laws variable is measuring both effects in the previous models and articles – which would explain the extremely large effects. This overlap of measurement was precisely why the media effects variable was suggested in the first place. The media effects variable is not perfect, but it serves its purpose in showing the election laws variable may be capturing other effects as well and requires further study even after the refined coding. Further attempts at addressing the multicollinearity issues will be discussed in the following subsection.

In Model 5 divided government (original) not only fails to achieve statistical significance, but also has a positive coefficient. This is most likely the effect of the potential multicollinearity mentioned above, which will be further discussed later in the chapter. I fail to reject the null hypothesis for this model. The remaining three control variables are all statistically significant with media effects tempering the election laws effect. In Model 6 divided government (four year) is not statistically significant, and I fail to reject the null hypothesis. If a one-tailed significance

test were used, divided government (four year) would have had a statistically significant negative effect of 0.64% per year. That divided government (four year) remains negative, and almost significant, even with the added threat of multicollinearity, is further evidence of the potential of this version of the variable. The elections laws variable remains highly statistically significant at -13.44%, closeness of the election is statistically significant at -0.25%, and media effects is statistically significant at -8.37%. Even if divided government (four year) is statistically insignificant, the result is positive for the theory. Divided government has proven to be a fickle effect in previous replications, and signs of consistency between models with the divided government (four year) coding are very encouraging. The varying results across the replications could be partially due to the way divided government was originally coded and not just because of the VAP data or potential flaws in the theory.

Addressing Multicollinearity

Multicollinearity is incredibly problematic for regressions and is difficult to correct: more accurately it cannot be corrected, just worked around. Even if the multicollinearity between the election laws and media effects variables was expected, it still needs to be addressed. Extensive research into what could be done showed how difficult the problem is to solve. There are two experimental types of regression being tested, but these methods are believed to cause other issues with the data and results, which make them inappropriate for use in this thesis. More traditional methods were applied instead. First, a variance inflation factor (VIF) test was performed to verify which variables were correlated and how correlated they were. There is some academic disagreement about what is an acceptable VIF result, so a moderate interpretation of the results will be used here (Williams 2015). VIF results are usually run in the background

instead of being included in research, but these results reveal something unexpected enough to warrant their inclusion later in the section.

Once the VIF results reveal the extent of the problem, steps to correct it can be taken. The traditional options have their own challenges. First, multicollinearity can be addressed by adding more cases to the sample (Manheim, Rich and Willnat 2002; Williams 2015). This is not currently an option since the only available data is unreliable as discussed earlier in the chapter (McDonald 2016). Second, if it is theoretically justifiable, the problem variables should be combined into a scale (Manheim, Rich, and Willnat 2002; Williams 2015). Unfortunately, media effects and election laws are too different to justify a scale. The third option is to recode one of the problem variables and retest the model(s), but an alternative coding of media effects was tested and the results still showed evidence multicollinearity (Williams 2015). Fourth, separate models can be run which only include one of the offending variables to see if the multicollinearity persists (Manheim, Rich, and Willnat 2002; Williams 2015). The fourth option is certainly not preferred but is the only one available given the constraints of the project. Because the fourth option is the only one available that would result in an abundance of unwieldy and unnecessary models, which would lead to the findings getting lost in the tables. To get around this problem, the multicollinearity fix models will be included in a separate appendix for those who wish to look through the results and summarized here as briefly as possible. For those who are interested the models can be found in Appendix B.

Examining the VIF results for the divided government (original) model(s) shows something surprising. The original assumption was that only the election laws and media effects variables were collinear, and they are correlated, but both variables are correlated with a third variable as well: the lagged turnout variable. To verify that the lagged turnout variable was correlated with

the election laws and media effects variables, further tests were performed. The next three models only included two of the three correlated variables. The results consistently show the remaining variables are correlated. Clearly, the lagged turnout variable was part of the problem, and the next step was to drop two of the problem variables. The VIF results for the three models with only one of the problem variables show no multicollinearity. The presence of multicollinearity explains the signs flipping for divided government and closeness of the election, the sudden loss of statistical significance, and high R-squares across models and replications. The problem is when two of the collinear variables are removed, the model now suffers from misspecification and the results are not suitable for interpretation due to the lack of proper controls. While the results of Model 2 were hopeful, there are now enough problems to cast doubt on the results.

After the above findings testing, the divided government (four year) models may seem redundant. The results for the divided government (four year) models show something the previous models did not: all the divided government (four year) coefficients are consistently negative across models regardless of which variable(s) were dropped. Unfortunately, only the two models with election laws and closeness of the election as the controls are statistically significant. The lack of statistical significance in the other models may make them easy to dismiss; however, divided government (four year) is consistently negative across all models. This suggests that the four-year coding holds up to the effect of the multicollinearity better than the original 12-year coding of divided government. While extensive work would need to be done on the control variables and models before any future research on the topic can be attempted, I recommend the divided government (four year) coding be considered for the dependent variable.

Addressing Autocorrelation Concerns

Given the length of time covered in the models, concerns about the possible presence of autocorrelation were raised by a member of the thesis committee. Autocorrelation can be a significant problem for time series models, and while lagged turnout variables were once considered a way to control for time series issues, they can exacerbate autocorrelation issues (Halcoussis 2005). Autocorrelation can cause several issues with a model. Like multicollinearity, autocorrelation can be a sign of a mis-specified model, which can result in a model's coefficients being biased (Halcoussis 2005). Autocorrelation can also lead to reported standard errors being smaller than they really are, which can cause variables to appear significant when they are not (Halcoussis 2005). If autocorrelation is present, the significant findings from earlier in the chapter could be false. Under the circumstances relying on a lagged turnout variable as a time control is insufficient, so Durbin's H tests for autocorrelation were performed for the divided government (original) and divided government (four year) models from the first two tables⁵. The results of the Durbin's H tests can be found in Table 4 of Appendix A. To interpret the H statistic, the rule of thumb is anything over 1.96 is suffering from the first-order autocorrelation described above and I can reject the null hypothesis of no autocorrelation (Gunjarati and Porter 2009). Anything below 1.96 then I fail to reject the null hypothesis of no autocorrelation, which means there is no first-order autocorrelation present in the model (Gunjarati and Porter 2009). In a normal distribution, 1.96 represents the threshold for the 95% confidence interval, which is the standard significance level, and preferred in this case (Gunjarati and Porter 2009).

The Durbin's H test results were mixed. Model 2, which is the divided government (original) model without the media effects variable, has an H statistic of 0.62, which means that

⁵ The divided government (dual house) and multicollinearity models were excluded because they were redundant.

autocorrelation is not present, and I fail to reject the null hypothesis. This is interesting since divided government (original) was statistically significant in Model 2, which was exciting for the theory since it was the first-time divided government was statistically significant in a replication. Unfortunately, this model still has multicollinearity issues, so while the model is free of autocorrelation Franklin and Hirczy de Miño's (1998) theory is not fully vindicated. The H statistic for Model 5, which includes the media effect variable, is 2.52. Autocorrelation is present in Model 5 and I must reject the null hypothesis. Divided government (original) was statistically insignificant, positive, and had three correlated control variables in Model 5, so the presence of autocorrelation is not a huge blow. Given the only change to this model was the addition of the media effects variable, it is tempting to speculate on how that may be related to the presence of autocorrelation in this model. This model is suffering from enough other problems that trying to unravel which changes caused which problem is difficult.

The Durbin's H results for the divided government (four year) models show improvement over the divided government (original) models. The result for Model 4, the model without the media variable, is an H statistic of 1.27. I fail to reject the null hypothesis, and there is no autocorrelation in this model. Model 6, which includes the media effects variable, has an H statistic of 1.33 meaning there is no autocorrelation. I once again fail to reject the null hypothesis of no autocorrelation. This is an exciting result for the theory because the divided government (four year) model remained consistent in both models. Even though divided government (four year) was only statistically significant in Model 4, and still suffers from multicollinearity, the divided government (four year) coding has consistently held up better than the original coding. All the divided government (four year) models may not have been statistically significant, but they were consistently negative and autocorrelation free. While the research design is clearly

flawed given the presence of multicollinearity in the models, and there needs to be a significant amount of work done to the control variables to fix these issues, these results suggest future research should use the four-year coding of divided government because of its consistency.

Midterm Election Models

This section contains the midterm election only models. The variables are coded using the same methods as the presidential models, but the dates for the election laws and media effects variables are adjusted to represent the closest midterm election after the event occurred instead of the closest presidential election. The closeness of the election variable will not appear in these models due to the lack of a comparable midterm proxy. There are several midterm models: the first is the closest to a midterm-level replication of Franklin and Hirczy de Miño's (1998) model, and the second uses the divided government (original) variable. Models addressing concerns of multicollinearity can be found in Appendix B with the other multicollinearity models. The main midterm models can be found in Appendix A Table 3.

Model 7 is the closest to a midterm level replication of Franklin and Hirczy de Miño (1998) possible. National level VAP turnout data was unavailable for midterm elections, so VEP turnout data is used for all midterm models. The new coding of the election laws variable appears in this model as well. The data for this variable is from 1842 to 1994, which is the midterm version of the Franklin and Hirczy de Miño (1998) data range. Divided government is statistically insignificant in this model with a coefficient of -0.27%, and I fail to reject the null hypothesis. The election laws variable is highly statistically significant at -15.70%. While the lack of statistical significance is disappointing, the results are otherwise in line with Franklin and Hirczy

de Miño's (1998) original research. The lack of available VAP data does make it difficult to compare or even speculate on the reason for the lack of significance in this case.

The eighth model contains the results for the midterm version of the divided government (original) variable, which covers the full period from 1842 to 2014. Divided government (original) is statistically insignificant, and I fail to reject the null hypothesis. The coefficient for divided government is -0.19%, which is interesting since it could suggest the midterm voters could react differently to exposure to divided government than presidential voters. However, since the results are not statistically significant, no conclusions can be drawn. More interesting are the results for the control variables. The election laws variable is statistically significant at the $p < 0.05$ with a coefficient of -13.49%. The media effects variable fails to achieve statistical significance in this model but is also the lowest coefficient for this variable in a model thus far at -3.58%. More interesting are the VIF results, which show that the election laws and the lagged turnout variable are even more highly correlated than in the presidential models. The high collinearity theoretically could mean any statistical significance was lost due to inflated standard errors, though this is purely speculation. Additionally, the higher level of correlation suggests something about the midterm models exacerbates the problem with the two variables. These models cannot tell us what the reason for the higher correlation between the variables. This does suggest further research into the differential effects of changes in election laws on presidential and midterm elections could provide interesting results, but that is outside the scope of this research. Media effects remains correlated with the election laws and lagged turnout at about the same level as in the presidential models, so it is not impacted by the switch to midterm turnout data the same way. Divided government (original) was statistically significant in two models;

however, those models only have one control variable and are miss-specified. This suggests that a model with new non-correlated variables could yield significant results in future studies.

Table 4 includes a Durbin's H test for autocorrelation for Model 8 since it is the full model. Model 8 has an H statistic of 2.56, meaning autocorrelation is present, and I reject the null hypothesis of no autocorrelation. It is interesting that the two 12-year models with the media effects variable both suffer from autocorrelation. The models are still mis-specified, and the results are not statistically significant, so any interpretation would be speculation at this point. However, this does suggest, once again, that the 12-year coding of divided government is not resilient.

The midterm election results may seem disappointing yet given the difference in midterm voter turnout and the lack of available midterm control data, variation should be expected. The consistently lower midterm results suggest there could be a difference in behavior, but the level of multicollinearity and autocorrelation present in these models makes it difficult to say with any confidence. When more data becomes available, it could be interesting to revisit the aggregate-level research with a new model design using a four-year divided government variable. Yet presently the original research design is fatally flawed. The next chapter will attack the research question from a new angle with a completely different research design, which should avoid the errors of the aggregate-level models.

CHAPTER FOUR: INDIVIDUAL-LEVEL METHODOLOGY AND FINDINGS

Individual-Level Methodology

In this chapter, the relationship between divided government and voter turnout will be tested at the individual level for the first time to date. Franklin and Hirczy de Miño's (1998) theory had an individual-level aspect to it that was not directly tested in their research. The mechanism by which divided government affects voter turnout in their theory is political trust (Franklin and Hirczy de Miño 1998). Franklin and Hirczy de Miño (1998) argued that divided government gave rise to voter alienation because it is not as clear which party is responsible for current policy, which makes it harder for voters to decide who blame or reward with their vote. Under unified government, responsibility for the current state of the Union is clear because there is one party in charge of Congress and the Executive Branch directing the political agenda. Divided government leads to confusion by providing an additional party pushing their own agenda (Franklin and Hirczy de Miño 1998). This would increase information costs and leave voters unmotivated due to the uncertainty about who to hold responsible at the polls (Franklin and Hirczy de Miño 1998). This concept that divided government makes it more difficult for voters to assign blame or reward is found in more recent research as well (Fiorina 2003). The theory is these factors and others would "lower the incentive to turn out and perhaps give rise to alienation" (Franklin and Hirczy de Miño 1998, pg. 318).

Political trust is a commonly used proxy for alienation in individual-level research (Mason, House, and Martin 1985; Keith, Magleby, Nelson, Orr, Westyle, and Wolfinger 1992; Southwell 2008). By changing the unit of analysis from the aggregate level to the individual level it becomes possible to test all elements of Franklin and Hirczy de Miño's (1998) theory.

Individual-level data allows the effect of divided government on trust to be tested and the combined effect of divided government and political trust on voter turnout to be tested instead of assuming the role of political trust in the causal relationship.

The American National Election Studies (ANES 2018) provides several decades of survey data that may be used to test this relationship at the individual level. The dataset will use the ANES (2018) election year survey data from 1972 to 2016. The cumulative dataset includes both presidential and midterm elections for the period, except for 2006 when the ANES (2018) tested an incompatible survey⁶ and 2014 when the ANES did not produce a survey. The reason midterm elections are included is it doubles the number of unified periods to four, which provides more variation. The limited variation is unfortunate, but divided government was increasingly common during the period the surveys were conducted (Fiorina 1992; Mayhew 2005). The dataset contains approximately 33,000 cases during the period in question. While the ANES does have earlier survey years available, they do mention problems with racial imbalances prior to 1972 that could skew the data (ANES N.D.). Specifically, they mention that the African-American respondents surveyed prior to 1972 were not representative of the African-American population on other socio-economic demographic variables (ANES N.D.). The trust variable being used was added in 1964, so only a few years are being excluded as a precaution. Additionally, by excluding those years, the dataset does not need to be weighted to correct for oversampling, which is important because weights are incompatible with the statistical method being used since it leads to erroneous results. The method will be logistic regression with

⁶ The 2006 survey was a pilot study, which tested new questions instead of the standard ANES questions (ANES 2018). The survey questions used in this chapter were not included in the 2006 pilot study, so there was no data from that year to include in the dataset.

predicted probabilities to facilitate interpretation of the statistics since binary dependent variables are being used.

Individual Variables

The variable measuring divided government is based on a variable from a previous study by Nicholson, Segura, and Woods (2002), in which they coded their own divided government variable to test its effects on the presidential approval variable from the ANES. The first independent variable, *Divided Government*, takes the value of “0” when the government is divided and the value “1” when the government is unified. Unlike the aggregate-level divided government variables, the individual-level variable will only consider if the government was unified or divided during the two-year period immediately before the election instead of measuring how many total years of division occurred prior to the election. This is due, in part, to the desire to code the variable in a similar way to Nicholson, Segura, and Woods (2002)⁷, and due to the need to have periods of unified government for variation. There would be fewer unified cases in the dataset if the coding were based on four-year periods, for example. This variable was created from the information originally gathered to create the aggregate-level divided government variable and shares the same sources (U.S. House N.D.; U.S. Senate N.D.; Cronin and Genovese 2010; FEC 2013; FEC 2017).

The second independent variable is *Trust in Government*, which serves as a proxy for political alienation (Mason, House, and Martin 1985; Keith et al. 1992; Southwell 2008). There is some scholarly debate about how to measure this concept, but trust in government is used by scholars

⁷ The coding was changed to make the results easier to interpret. Nicholson, Segura, and Woods (2002) coded unified years as “0” instead of “1” and divided years as “1” instead of “0”. The variable coding was changed to match the coding of other variables in the dataset. “Positive” occurrences such as voting, high political trust, and unified government are coded as “1”, and “negative” occurrences such as not voting, low political trust, and divided government are coded as “0”.

with differing opinions on how alienation should be measured (Mason, House, and Martin 1985; Keith et al. 1992; Levi and Stoker 2000; and Southwell 2008). This variable does come from the ANES (2018) survey data, which provide several options for measuring trust and cynicism both pre- and post-election. Since this thesis examines if a lack of political trust leads voters to abstain during the election, a pre-election trust variable is preferred. The variable chosen is based on a four-response question asking how often the respondent trusts the government. The variable was collapsed into a binary variable with the “none” and “some of the time” responses recoded as “0” and the remaining options recoded as “1”, except the “don’t know/not applicable” responses, which were coded as missing (ANES 2018).

The variable was collapsed because it is being used both as a dependent and independent variable in different models, and because of the minimal number of cases for the two extreme categories (“none” and “just about always”), which would have made it difficult to get accurate results for those categories by themselves. Use of the other questions and the trust in government index were considered but rejected since this question matched Franklin and Hirczy de Miño’s (1998) description of divided government-caused alienation better than the alternatives. The other questions considered ask respondents if ‘the government is run by special interests or for everyone’s benefit’ and if the respondent ‘felt congressmen were crooked’ which seemed to capture specific feelings about groups or individuals rather than an individual’s trust in government in general. The trust in government index was considered, but there were several problems with the index in the context of this research. First, the index includes the previously rejected questions. Second, collapsing the trust index resulted in severely skewed distribution. Third, the original coding of the index could not be used to program constraints.

The ANES (2018) has several questions measuring voter turnout. The dependent variable *Voter Turnout* comes from the three-category post-election survey question that asks if the respondent voted in the election and whether they were registered. The variable is recoded as a binary variable with the two “no” responses (“not registered/did not vote” and “registered/did not vote”) coded as “0”, “yes” responses coded as “1”, and all others coded as missing. This version was chosen as a proxy for the ANES’s (2019) more concise voting variable after they reported inaccuracies in the preferred variable and recommended recoding this one as a proxy.⁸ The ability to use pre- and post-election surveys of the same individuals for these questions will give an idea if the pre-election alienation affected whether the respondent voted, which makes it a better option than the pre-election intention to vote question. As always, there is no way to assure the respondent voted, which is a problem with the nature of the survey device (Karp and Brockington 2005; Holbrook and Krosnick 2010). While the difference between the survey results and the actual turnout numbers can be substantial, there are a variety of other factors at play which can make the problem look worse (Holbrook and Krosnick 2010). One problem is errors in the methods used to check if survey respondents voted (Holbrook and Krosnick 2010). Another is scaling the survey data against voting age population (VAP) data instead of voting eligible population (VEP) despite the tendency not to survey groups included in the VAP data which are excluded from the VEP data (Holbrook and Krosnick 2010). A third example is failing to control for nonresponse answers (Holbrook and Krosnick 2010).⁹ Though concerns with over-reporting are valid, it is a problem for surveys in general not just the ANES (Holbrook and Krosnick 2010). Precautions have been taken such as removing the nonresponsive respondents

⁸ “February 1, 2019[.] For 2016 data, VCF0702 (voter turnout) was created using an incorrect variable. However, correct turnout data are available in VCF0703, in slightly different format. VCF0702 will be corrected in the next release.” (ANES 2019).

⁹ A full description of the differences between VAP and VEP data can be found in chapter 3.

from the variables used in the models. In this case, the potential for over-reporting “yes” responses are less problematic since it makes the hypothesized effect less likely to be found – it is more likely to get a false negative than a false positive.

The control variables for these models are the standard controls for voter turnout models from the pre-election data. The control variables are *Age*, *Race*, *Gender*, *Income*, *Partisan Strength*, and *Education*. “Don’t know/not applicable” and similar non-responses will be coded as missing for these variables.

The control variable age is the ANES’s (2018) seven-category variable, and the only change made was to remove the missing data. The categories are “17 to 24” which is coded as “1”, “25 to 34” is coded as “2”, “35 to 44” is coded as “3”, “45 to 54” is coded as “4”, “55 to 64” is coded as “5”, “65 to 74” is coded as “6”, and “75 to 99+” is coded as “7”. The continuous coding of the alternate age variable caused STATA to crash when performing calculations, so this version is being used due to program constraints. To measure race, the ANES (2018) four-category race variable was recoded as a binary variable with the category “white” coded as “1” and the category “nonwhite” coded as “0”. While it would have been preferable to use the four-category version, the majority of respondents are white, and the other categories are too small leading to potential issues with inflated standard errors. For the gender variable, male respondents are coded as “0” and female respondents as “1” (ANES 2018). The latest version of the survey included an “other” category for those who do not wish to identify as either gender. However, there were only 11 individuals during only one survey year who identified as “other”, so this category was coded as missing since there was not enough data to accurately measure their responses (ANES 2018). The ANES (2018) codes income as five grouped percentile ranges, which did not need to be recoded except to remove the “don’t know/not applicable” responses.

The cases have been labeled from low to high income in the table for readability, since percentile ranges were unwieldy.

The ANES (2018) seven-category party identification variable was recoded to reflect the strength of the respondent's identification instead of its direction on the political continuum. Independents were coded as "1", independents who reported leaning towards either the Democratic or Republican party were coded "2", Weak Democrats and Republicans were coded as a "3", and strong Democrats and Republicans were coded as "4". To capture the effect of education the variable education was created from the ANES education variable. The "some college" and "college or higher" categories were combined into a single college category coded as "1", and the "8th grade or less" and "high school" categories were combined and coded as "0". This variable was collapsed in an attempt to correct the skewed distribution of the data, since the majority of respondents during this survey period fall in to the "8th grade or less" category.

Individual Models

To capture Franklin and Hirczy de Miño's (1998) theorized effect, the two independent variables, divided government and trust in government, are interacted to test their combined effect on voter turnout. Table 11 contains the interaction model and two additional logistic regression models. Model 1 more closely replicates Franklin and Hirczy de Miño's (1998) original design by testing the effects of divided government on voter turnout. Model 2 contains the interaction model. Finally, Model 3 tests the effect of divided government on trust in government as a precaution. Table 12 consists of the predicted probabilities for the interaction model, since it is the main model of interest.

The results in Model 1 may look promising at first since the divided government variable is highly statistically significant, except unified government is having a negative effect on voter turnout instead of divided government. This is contrary to the hypothesized effect, and I must reject the null hypothesis. According to Franklin and Hirczy de Miño's (1998) theory, divided government results in lower turnout, but this model suggests unified government leads to lower turnout instead. This is, however, only reporting the effects of divided government, and the true test of the theory will be the interaction model which will show the combined effects of divided government and political trust on voter turnout. The control variables are all significant in this model except for gender. Education shows a negative effect as the level of education increases, which is unusual, but likely the effect of the period the survey covers. Adults in the 1970's may have a slightly different degree mix than adults in the 2000's as the number of individuals with higher education degrees has increased over the years.

The next model is Model 2, which is the interaction model. In this regression, the results appear more in line with expectations. The interaction of unified government and high trust shows a statistically significant positive effect. Unified government on its own is still statistically significant and negative, so judgment will be withheld until the predicted probabilities are reviewed in the next paragraph since they should provide a more detailed explanation than this model does on its own. High trust in government has a statistically significant and positive coefficient, which is promising. The remaining control variables all mirror the results found in Model 1 with only slight differences.

The predicted probabilities for the interaction model can be found in Table 12 Model 1, and they paint a very interesting picture. The predicted probabilities show a 64 to 74 percent chance of voter turnout being affected by the varying combinations of the interaction. As Model 1 of

Table 12 shows, the effect is not consistent with the hypothesis. Voter turnout is higher when the government is divided than it is when the government is unified. While there is a difference in the participation rate between high trust and low trust voters, the gap is smaller under divided government than unified government. While low trust voters are still less likely to vote than high trust voters under either divided or unified government, low trust voters' probability of voting is 72% under divided government and 64% under unified government. The high trust voters have a 74% probability of voting under divided government, and a 71% probability under unified government. That the low trust voters are more likely to participate under divided government than the high trust voters are under unified government is completely at odds with the theory. This suggests divided government slightly increases the probability of voting for both those with high and low trust in government instead of decreasing the probability of voting as hypothesized. This could be an effect of the period the data covers as there are several more years of divided government than unified government¹⁰ included in the sample, since the ANES surveys take place during a period when divided government became increasingly common (Fiorina 1992, Mayhew 2005). There is a possibility that the tendency of survey results to over-report voter turnout is in effect here. If the hypothesized effect exists over-reporting should not completely reverse the results as shown in Table 12 and should be consistent over time, which would have affected the unified years as well. For whatever reason, divided government does not act in accordance with Franklin and Hirczy de Miño's (1998) theory at the individual level, and it is overpowering the turnout-lowering effect of political trust seen in Table 12 rather than amplifying it as hypothesized. Divided government just does not seem to alienate voters. Under these conditions, I fail to reject the null hypothesis. The results refute the theory that divided government influences trust and lowers voter turnout rather than supporting it.

¹⁰ As mentioned earlier in the chapter, four election years/cases of unified government are present in the sample.

The predicted probabilities for the control variables from Table 12 Model 1 did turn out mostly as expected. These were all the standard controls for voter participation models, so surprises were not really expected. All the controls were statistically significant in the logistic model from the last table except for the gender variable, which failed to achieve statistical significance. The predicted probabilities of voter participation for age vary from a low of 56% in the “17 to 24” year old category, to a high of 86% in the “65 to 74” category. The probabilities gradually increase as age increases. This is in line with expectations as the consensus is people are most likely to vote as they get older (Dalton 2013). Income shows the same steady increase as one moves from the poorest group at 53% to the wealthiest at 87%, which also conforms to expectations. The control variable for party strength was coded to show strength of the respondents’ identification rather than where they fall on the political continuum. The probabilities show an increase in the probability of voting as the strength of partisanship increases – independents have the lowest probability at 53%; those who identify as independent who lean towards either party have a probability of 64%, weak partisans have a slightly higher probability at 73%; and strong partisans have the highest probabilities at 81%. These results are expected: the stronger an individual’s partisanship the more likely they are to participate in elections despite the external effects of the interaction. Race shows almost identical probabilities at 71% for those who identify as white and 74% for those who do not. Gender failed to achieve significance with both the male and female categories having the same probability of 72%. The results for the education control also seem unexpected as they show those with some college or a college degree to be slightly less likely to vote than those with a high school diploma or less – a difference of 65% to 73%.

Under the circumstances an additional check of the theory was required, since the interaction produced results contrary to expectations. An additional logistic regression was run to test the effect of divided government on trust in government, since the theory hinges on divided governments ability to affect political trust which in turn influences voter turnout among low trust individuals. The results of this regression are found in Table 11 Model 3. It should not be surprising that unified government is shown to have a negative effect on political trust as this is in keeping with the results above. The coefficient is statistically insignificant though barely so with a probability value of 0.11 using a two-tailed test. The effect would have been technically significant if a one-tailed test had been used, but the results were still contrary to the theory. Under these conditions, I must reject the null hypothesis without reservations. Divided government outright refuses to follow Franklin and Hirczy de Miño's (1998) theory. It simply does not influence political trust. All the controls are highly significant in this model except for age. Except for gender, the remaining controls have a positive effect on political trust. The gender variable shows a negative effect on trust if the respondent is female. Race and education show the greatest effects with white and college educated individuals having the highest levels of political trust.

Chapter Conclusion

These results are certainly contrary to expectations. Considering the body of divided government research discussed in the literature review, they are not entirely out of character. Divided government research has suggested potential reasons for its increased occurrence including explanations such as voter preference for divided government, polarization, and split-ticket voting – all of which would fit very nicely with these findings (Fiorina 1992, Leonard 1991, Shugart 1995, Mulligan 2011). If divided government is the goal of these voters, logically

an increase in turnout could follow. An additional argument could be made for the effects of political polarization considering the result of the party identification/strength of partisanship variable. Table 12 shows that the strongest partisans have a probability of voting 8% to 17% higher than the previous two categories suggesting the most polarized individuals may be more likely to vote. These are all areas that should be considered in future research on the effects of divided government on voters. If divided government does not lead to ambivalence and lower turnout, but instead to an increase in turnout, what other factors could influence this change?

Arguably, the results can be used to make the opposite argument than the one Franklin and Hirczy de Miño (1998) theorized. Divided government, by increasing the level of partisan polarization, makes it easier for voters to choose a side and overcome low levels of political trust and turnout to vote. In Nicholson and Segura's (1999) research, they found that under divided government voters are more likely to blame the opposition party for what ails society, and further research showed divided government leads to higher presidential approval ratings (Nicholson, Segura, and Woods 2002). Rather than making it harder for voters to choose and increasing information costs leading to alienation and lower turnout as Franklin and Hirczy de Miño (1998) suggested, it seems divided government may make it easier for voters, even alienated voters, to pick a side. If it is easier for voters to pick a side, then it may also be easier for them to vote. Southwell's (2008) article shows that different types of alienation have different effects on voters – namely those with cynicism-based alienation issues, like political trust, are more likely to vote if they have at least a minimal amount of political efficacy. If divided government makes it easier to blame one party and lowers information costs because there is an obvious target for blame, then those with a minimal knowledge of the country's political situation and trust-based alienation may be more likely to turnout, thus overcoming the hurdle of their political trust issues

as seen in the interaction model. While further research would be needed, perhaps divided government could be the catalyst for a perfect storm of political phenomenon to increase the likelihood of voting, especially for those with low levels of political trust.

Under the circumstances, it could be argued that the theory itself is lacking. All three models had incredibly small pseudo R^2 of 10% to 11%. This suggests the models did not account for a great deal of variation in voter turnout. Once again, divided government is not the giant missing piece of the voter turnout puzzle it appeared to be in Franklin and Hirczy de Miño's (1998) article. Whether the theory can be expanded to address the variation that was unaccounted for is something future researchers will need to address. Currently the results from testing this theory raise more questions than are answered.

These results are, in a way, consistent with the aggregate-level replications from the previous chapter and Beck (2016a; 2016b). Franklin and Hirczy de Miño (1998) had a great theory that could explain two political phenomenon researchers were, and continue to be, concerned about: the decrease in voter turnout and the increased occurrence of divided government. Coupled with their results, Franklin and Hirczy de Miño (1998) make a very compelling argument for divided government leading to decreased turnout using the data and methods commonly incorporated at the time. The problem is when modern data and tests for time series and multicollinearity issues are used the whole theory falls apart at the aggregate level, and something similar may be happening here. The theory always had an individual level component by their own admission, but when tested the theory does not hold. Divided government has a relationship with voter turnout, just not the relationship theorized. Divided government does not lower political trust and it does not lower voter turnout during the 44-year period tested. As always, with more data or

new variables, the hypothesized effect may be found in the future, but at this time with the available data there is no evidence of the theorized effect.

CHAPTER FIVE: CONCLUSION

The 2016 presidential election resulted in a return to unified government for the first time in six years. Unified government has remained a rare occurrence over the last 50 to 60 years, but this return to the theoretically less contentious and more productive form of government was short lived. In the 2018 midterm election, the government was once again divided. This was not a surprising result since recent history has shown that unified governments are not very durable. The voter turnout for these two elections is a pleasant surprise. Looking at the stricter Voting Eligible Population (VEP), turnout results was 60.1% (McDonald 2019). This is within two percentage points either way of the previous three presidential elections, and almost two percent higher than the 2012 voter turnout (McDonald 2019). The 2018 midterm resulted in a 50.3% voter turnout (McDonald 2019). This was the highest-level midterm turnout has reached since 1914 (McDonald 2019). The next closest midterm turnout was 1966 (McDonald 2019). For the first time in American history, a midterm election broke the 100 million voter mark in 2018 (Segers and De Pinto 2018). While the divided government trend is continuing to hold steady, the voter turnout trend may slowly be showing a rise in turnout. It is too earlier to say for sure if voter turnout is finally recovering or if recent elections are anomalies, but this should not be happening according to Franklin and Hirczy de Miño's (1998) theory. The consistent presence of divided government should have prevented a noticeable rise in voter turnout. The voter turnout damping effects of divided government should have been even more pronounced under the original 12-year cumulative effect Franklin and Hirczy de Miño (1998) proposed. A four-year cumulative effect could have been tempered enough by the periods of unified government that occurred over the last 20 years to see a gradual increase in voter turnout. Given the resiliency of the four-year divided government variable, it is difficult to dismiss entirely.

The results from the previous two chapters were mixed. The aggregate-level models were plagued with multicollinearity, two suffered from autocorrelation, and several were not statistically significant. Despite all the problems there was something positive to be found in the aggregate-level results. Divided government was statistically significant in Models 2 and 4 for the first time in a replication. Both have multicollinearity problems, so it is impossible to say what is happening with any certainty, but there is a glimpse of hope for the theory. With the right research design and properly specified models, maybe the theory could be resurrected. Then there are the individual-level models. Divided government had a statistically significant positive effect on voter turnout even when interacted with low political trust. The presence of divided government appears to inspire voters in these models. This is completely contrary to the theory. The aggregate and individual-level results showed completely opposite effects. This could be due to model mis-specification and multicollinearity or it could be the theory is fatally flawed. The results are theoretically interesting enough that they could inspire future research, but the theory would have to be addressed. Divided government is consistently a fickle phenomenon. Much of the literature included in chapter two showed contradictory effects if the researcher made a minor change (Fiorina 1992; Shugart 1995; Sigleman, Wahlbeck, and Buell 1997; Nicholson and Segura 1999; Fiorina 2003). This is what makes divided government fascinating and why this singular theory inspires academic curiosity whether it results in replications or merely citations by researchers who are studying the next improbable but possible connection between divided government and a myriad of unlikely issues. The next section of this chapter will discuss the expected findings and how those expectations were met. This will be followed by a section on future research directions in light of the results.

Expected Findings

This section will discuss the expected findings from Chapter One. As they were in the introduction, the expected findings will be separated into different subsections for the aggregate and individual level expected findings. For the readers ease, the expected finding will appear first followed by a discussion of the actual findings.

Aggregate-Level Expected Findings

EF 1: Divided government will have a statistically significant negative effect on voter turnout in presidential elections. Specifically, by correcting problems with the model, a significant effect should be found. Further, the new divided government variables should outperform the original variable for this effect, since the new variables correct potential issues with the way the original variable was coded.

Divided government (original) and divided government (four year) both had statistically significant negative effects on voter turnout in the updated replication models. Divided government (four year) also outperformed the original version of the variable by 48 percentage points. The problem is both models suffers from multicollinearity which worsens with the addition of the media effects variable in the secondary models. The four-year variable was only slightly more resilient against multicollinearity than the original variable. Also, the four-year variable did not suffer from autocorrelation in either model whereas autocorrelation was found in the second divided government (original) model. While some of the expectations were met, the underlying issues with the research design cast doubt on the findings, so the first two versions of the divided government variable underperformed overall. The divided government (dual house) coding had a severe positive skew leading to inaccurate results and failed to meet expectations.

EF 2: Divided government will have a statistically significant negative effect on voter turnout in midterm elections. Since midterm elections voter turnout appears to vary more, and midterm elections are considered different than presidential ones in many ways, this makes it more likely to find an effect. Additionally, because midterm elections have consistently lower turnout, the effect of divided government should be more pronounced.

The midterm models failed expectations entirely. In neither the replication model nor the full model with the media effects variable did divided government have a statistically significant effect. In both models, the insignificant divided government coefficient was substantially smaller than the presidential level coefficients. Model 8, the full model, has both severe multicollinearity issues and an autocorrelation problem. The difference between the midterm model results and the presidential model results are completely contrary to expectations.

EF 3: The election laws variable will continue to have a large statistically significant negative effect on voter turnout. By correcting the coding of the election laws variable to account for changes in national election laws since 1916, the improved accuracy should result in a continued effect, while relieving concerns it may have been measuring other effects such as the passage of time or changes in media availability. This effect may be tempered by the addition of the media effects variable but is expected to continue to outperform the other variables.

Election laws continued to have a large statistically significant effect across all the main presidential and midterm models. Correcting the coding did not appear to change the effect, nor did adding the media effects variable have a major change on election laws' coefficients. The problem is election laws are correlated with both the lagged turnout variable and the media effects variable. While the expected finding was found, it is also meaningless since the inflated coefficients are likely the result of the multicollinearity. The fact that election laws are correlated

with the media effects variable suggest that election laws variable is capturing other effects as well. This variable completely failed expectations.

EF 4: Media effects will have a statistically significant negative effect on voter turnout. This variable was added to address concerns about whether the election laws variable was measuring what it was election laws or if it was capturing the effect of changes in media technology such as the syndicated newspaper and radio which occurred close to the same time as the election laws variable changes. It is reasonable to expect that the increased access to information should result in changes in voter behavior. If the original theory that exposure to divided government results in voter alienation and lower voter turnout is accurate, then increased exposure to media should have a negative effect on voter turnout.

The media effects variable is statistically significant in the two presidential models but failed to achieve significance in the midterm model. This variable was added mainly to address fears the election laws variable was capturing other effects as well, since media effects and election laws are correlated the variable performed its task admirably. While the multicollinearity makes the results difficult to interpret this variable is considered a success since it exposed the issues with the original controls.

Individual-Level Expected Findings

EF 5: Divided government will have a statistically significant negative effect on voter turnout. The relationship between divided government and voter turnout should be found in the individual-level model as well. The theory has always had an individual-level component, and the ability to test the theory at the individual-level with a large dataset should yield support for the theory.

Divided government failed to have a statistically significant negative effect. The results showed the opposite effect: that divided government leads to increased voter turnout. The individual-level dataset started in 1972 and ended in 2016 which is firmly in the period of increased divided government and decreased voter turnout, so if the theorized effect existed, these were almost ideal conditions to find it. Interestingly, even though the standard controls were used the pseudo R^2 were extremely low for the individual models suggesting the model was incomplete, a positive effect for divided government only offered a minimal explanation for variation in voter turnout. The expected findings were not found at all.

EF 6: The interaction between divided government and political trust will have a statistically significant negative effect on voter turnout. By interacting the independent variables, the relationship will be tested in full for the first time. This will provide a complete picture of the relationship between the variables allowing for further interpretation of the theory.

The interaction also failed to have the expected effect. The interaction had a statistically significant positive effect on voter turnout. Additionally, the interaction showed that divided government leads to an increase in voter turnout among the low political trust voters it should be alienating. The pseudo R^2 is still extremely low, so the interaction does not explain any previously unaccounted for variation in voter turnout. Moreover, these findings are deadly for the theory. Not only does divided government have a positive effect on voter turnout, but also it encourages low trust voters to vote. It would be difficult to find a result further from what Franklin and Hirczy de Miño (1998) theorized. The expected findings were not found, and the existing theory cannot explain what was found.

Future Research Directions

Considering the issues with the theory and the research design, future research directions are difficult to address, but there is always room for academic curiosity. An interesting theory is an awful thing to waste. The results from the two chapters may not have turned out as expected, but there are a few matters which should be addressed in future research. The most important suggestion for future research is probably that it takes place at a time when more years of data and new advanced statistical methods are available.

Based on the results in Chapter 3, the first recommendation for future aggregate-level research is to build the research design from scratch. To fix the multicollinearity problem, the design and variable coding would need to be overhauled. Further, the theory would need to be addressed since the individual results showed that divided government does not lead to alienation and low voter turnout, so a new theoretical mechanism would be required to explain how divided government is related to voter turnout. The results suggest the four-year coding of divided government is more resilient than the original 12-year coding, so either a four-year coding or possibly a binary variable which only considers if the government was divided in the previous two years like the individual-level version is recommended. Additional control variables need to be considered as well to correct the model misspecification. While election laws, closeness of the election, and media effects are all strong candidates for inclusion, a different way of measuring election laws and/or media effects would be a vital precursor to their inclusion. Another potential solution for reducing the methodological issues is shortening the time frame to reduce period effects and increase the amount of data for additional control variables. By starting the dataset in 1950, for example, it would reduce the risk of overgeneralizing and insure that there would be reliable sources for the data. The current dataset starts before Political Science was even an

independent field of study, so it may have been overambitious to start the dataset during a period when these issues were not being studied. Alternatively, a cross-sectional or comparative study at the state-level may be beneficial. By using state-level data it should be possible to shorten the period and provide extended recent periods of unified government for comparison.

New control variables are dependent on information availability, but there are a few options worth considering. First, an economic variable might be beneficial for model specification. Whether it comes from GDP, or interest rates, or the percentage of households above the poverty line, would require more research. Currency value could be another contender for an economic variable as well. There is a great enough variety of economic data that it should be possible to find a suitable variable. Second, a variable that measures partisanship may be informative if the necessary data could be found to construct it. Third, the effect of war could be informative since traditionally war necessitates drafting or recruiting voting age males to fight. This could affect turnout simply because a portion of the electorate was not present to vote. Alternatively, being at war could lead to an increase in patriotism which theoretically would in turn increase voter turnout. While morbid, the government and historians do keep good records of wars, which makes the data easier to source. The average level of education might be possible to test in the form of literacy rates, but the national-level data may be harder to come by for the earlier portion of the 1800s. These are just a few examples of additional variables which could be included, because one of the greatest lessons for future research from Chapter 3 is the need for properly specified models.

The suggestions for future individual-level research are a little less daunting. The first suggestion would be to test alternative reasons for divided government's positive effect. There needs to be a theoretical mechanism or reason for divided government to influence voter turnout.

One option could be partisan polarization. Divided government could heighten polarization and lead individuals to choose a side or become more resolute about their existing opinions.

Alternatively, voter turnout could be increasing under divided government because individuals prefer divided government and are turning out to vote split-tickets. Another option would be information accessibility. Increased access to political news because of advances in media technology could have made it easier for people to decide whom to hold accountable in the election and then vote. It may be worth considering how different types of political trust interact with divided government as well, based on Southwell's (2008) findings that voters react differently based on the type of alienation they have. It may also be worth looking into other surveys to see if the results vary depending on differences in the surveys themselves.

Whatever direction future research may take, great caution should be exercised. The theory may be compelling and logical, but it has proven difficult to accurately translate into a research design. The nature of the research question requires gathering data across large periods of time and/or from large groups of people, which can bring with it its own set of challenges. Even a cursory glance at the list of articles which cite Franklin and Hirczy de Miño's (1998) paper will show nearly a hundred articles – some of which were cited here. These articles often use Franklin and Hirczy de Miño's (1998) research as an example of why their untraditional theory is worth considering, and occasionally in research that questions whether the American system of governance and voting needs to be changed due to continued low voter turnout. The problem is Franklin and Hirczy de Miño's (1998) research design was fatally flawed and their methods were inadequate to correct the issues inherent in their design. This influential research that is being cited in these important papers is inaccurate – the theory, while compelling, cannot be found on either the aggregate or individual levels when proper methods and data are used. The article

should not be used as an example of anything except why it is important for scientists to continue to question theories and replicate prior research when updated data becomes available. At the time Franklin and Hirczy de Miño's (1998) data and methods choices were acceptable, but when the theory is tested with modern data and methods the results are disturbingly different. As scientists we have the responsibility to keep questioning everything and make sure the theories we teach and reference are accurate and not the result of out of date information and methods lest we continue to compound their errors. Regarding this research, the results are not as clear or definitive as one might hope, but at this stage it may be said that divided government does not have a statistically significant negative effect on voter turnout at either the aggregate or individual level of analysis.

APPENDIX A: CHAPTER THREE TABLES

Table 1: Regressions of U.S. Presidential Election Voter Turnout 1840-2016

	Model 1 VAP Replication 1840-2012	Model 2 Divided Government (Original)	Model 3 Divided Government (Dual House)	Model 4 Divided Government (Four Year)
Divided Government (Original)	-0.37 (0.26)	-0.51** (0.25)	–	–
Divided (Dual House)	–	–	-0.79*** (0.29)	–
Divided (Four Year)	–	–	–	-0.99** (0.45)
Election Laws	-13.72*** (3.19)	-19.10*** (3.79)	-18.68*** (3.60)	-17.98*** (3.67)
Closeness of the Election	-0.04 (0.10)	-0.17 (0.10)	-0.19* (0.10)	-0.17 (0.10)
Lagged Turnout	0.28 (0.14)	0.25* (0.12)	0.15 (0.13)	-0.15 (0.10)
Constant	56.40*** (10.98)	61.13*** (9.82)	67.68*** (10.18)	57.71*** (9.25)
R-squared	0.79	0.82	0.83	0.82
Adjusted R-squared	0.77	0.80	0.81	0.80
N	44	45	45	45

***Significant at $p < 0.01$ (two-tailed test), **Significant at $p < 0.05$ (two-tailed test), and *Significant at $p < 0.1$. Standard errors in parenthesis. Table presents coefficients and standard error in round form for readability, though statistical significance is based off the original results.

Table 2: Linear Regressions of U.S. Presidential Election Voter Turnout 1840-2016 with Media Effects Variable

	Model 5 Divided Government VEP Replication	Model 6 Divided Government (Four Year)
Divided Government (Original)	0.06 (0.32)	–
Divided (Dual House)	–	–
Divided (Four Year)	–	-0.64 (0.43)
Election Laws	-13.44*** (4.12)	-13.44*** (4.12)
Closeness of the Election	-0.24** (0.10)	-0.25** (0.10)
Media Effects	-10.05** (3.78)	-8.37** (2.82)
Lagged Turnout	0.14 (0.12)	0.15 (0.12)
Constant	69.72*** (9.79)	70.05*** (9.43)
R-squared	0.84	0.85
Adjusted R-squared	0.83	0.84
N	45	45

***Significant at $p < 0.01$ (two-tailed test), **Significant at $p < 0.05$ (two-tailed test), and *Significant at $p < 0.1$. Standard errors in parenthesis. Table presents coefficients and standard error in round form for readability, though statistical significance is based off the original results.

Table 3: Linear Regressions of U.S. Midterm Election Voter Turnout 1842-2014

	Model 7 VEP 1842- 1994 Model	Model 8 Divided Government (Original) Media Effects Model
Divided Government (Original)	-0.27 (0.23)	-0.19 (0.24)
Election Laws	- 15.70*** (4.38)	-13.49** (4.16)
Media Effects	-	-3.58 (3.08)
Lagged Turnout	0.48*** (0.13)	0.49*** (0.13)
Constant	34.15*** (8.93)	34.34*** (8.89)
R-squared	0.90	0.90
Adjusted R-squared	0.89	0.89
N	39	44

***Significant at $p < 0.01$ (two-tailed test), **Significant at $p < 0.05$ (two-tailed test), and *Significant a $p < 0.1$. Standard errors in parenthesis. Table presents coefficients and standard error in round form for readability, though statistical significance is based off the original results.

Table 4: Durbin's H Test Results for all Models

	Chi ²	DF	Probability of Chi ²
Model 2	0.62	1	0.43
Model 4	1.27	1	0.26
Model 5	2.52	1	0.11
Model 6	1.33	1	0.25
Model 8	2.56	1	0.11

APPENDIX B: CHAPTER THREE MULTICOLLINEARITY TABLES

Table 5: Linear Regressions of U.S. Presidential Election Voter Turnout 1840-2016

	Model 3.1 Divided Gov. (Original) Full Model	Model 3.2 Divided Gov. (Original) Election Law & Lagged Turnout Only	Model 3.3 Divided Gov. (Original) Media & Lagged Turnout only	Model 3.4 Divided Gov. (Original) Election Law and Media Only	Model 3.5 Divided Gov. (Original) Election Law Only	Model 3.5 Divided Gov. (Original) Media Effects Only	Model 3.6 Divided Gov. (Original) Lagged Turnout Only
Divided Government (Original)	0.06 (0.32)	-0.51** (0.25)	0.56* (0.31)	0.09 (0.32)	-0.62** (0.26)	0.93** (0.31)	-0.24 (0.31)
Election Laws	-13.44*** (4.12)	-19.10*** (3.79)	–	-15.77*** (3.60)	-25.38*** (2.22)	–	–
Closeness of the Election	-0.24** (0.10)	-0.17 (0.10)	-0.33** (0.11)	-0.25** (0.10)	-0.17 (0.11)	-0.41*** (0.11)	-0.27** (0.13)
Media Effects	-10.05** (3.78)	–	-16.39*** (3.60)	-11.49** (3.57)	–	-24.47*** (2.39)	–
Lagged Turnout	0.14 (0.12)	0.25* (0.12)	0.34** (0.12)	–	–	–	0.76*** (0.9)
Constant	69.72*** (9.79)	61.14*** (9.82)	53.43*** (9.20)	80.67*** (1.75)	80.53*** (1.94)	79.21*** (2.06)	19.05*** (6.54)
R-squared	0.84	0.82	0.80	0.84	0.80	0.76	0.70
Adjusted R-squared	0.83	0.80	0.78	0.82	0.78	0.75	0.68
N	45	45	45	45	45	45	45

***Significant at $p < 0.01$ (two-tailed test), **Significant at $p < 0.05$ (two-tailed test), and *Significant at $p < 0.1$. Standard errors in parenthesis. Table presents coefficients and standard error in round form for readability, though statistical significance is based off the original results.

Table 6: Variance Inflation Factor Tests of U.S. Presidential Election Voter Turnout 1840-2016

	Model 3.1b Divided Gov. (Original) Full Model	Model 3.2b Divided Gov. (Original) Election Law & Lagged Turnout Only	Model 3.3b Divided Gov. (Original) Media & Lagged Turnout only	Model 3.4b Divided Gov. (Original) Election Law and Media Only	Model 3.5b Divided Gov. (Original) Election Law Only	Model 3.6b Divided Gov. (Original) Media Effects Only	Model 3.7b Divided Gov. (Original) Lagged Turnout Only
Divided Government (Original)	2.06 (0.49)	1.13 (0.89)	1.58 (0.63)	2.05 (0.49)	1.07 (0.93)	1.31 (0.76)	1.16 (0.86)
Election Laws	4.89 (0.23)	3.59 (0.28)	–	3.70 (0.27)	1.15 (0.87)	–	–
Closeness of the Election	1.29 (0.78)	1.20 (0.83)	1.18 (0.85)	1.28 (0.78)	1.20 (0.83)	1.09 (0.92)	1.08 (0.92)
Media Effects	4.45 (0.23)	–	3.26 (0.31)	3.95 (0.25)	–	1.23 (0.81)	–
Lagged Turnout	3.80 (0.26)	3.38 (0.30)	2.88 (0.35)	–	–	–	1.08 (0.93)
Mean VIF	3.30	2.32	2.22	2.74	1.14	1.21	1.11

VIF presented over VIF Tolerance in parenthesis. Tolerance has been rounded for readability. Collinear VIFs in bold type.

Table 7: Linear Regressions of U.S. Presidential Election Voter Turnout 1840-2016

	Model 3.8 Divided Gov. (Four-Year) Full Model	Model 3.9 Divided Gov. (Four-Year) Election Law & Lagged Turnout Only	Model 3.10 Divided Gov. (Four-Year) Media & Lagged Turnout Only	Model 3.11 Divided Gov. (Four-Year) Election Law and Media Only	Model 3.12 Divided Gov. (Four-Year) Election Law Only	Model 3.13 Divided Gov. (Four-Year) Media Only	Model 3.14 Divided Gov. (Four-Year) Lagged Turnout Only
Divided Government (Four-Year)	-0.64 (0.43)	-0.99** (0.45)	-0.39 (0.42)	-0.62 (0.43)	-1.07** (0.47)	-0.07 (0.57)	-0.86 (0.56)
Election Laws	-13.44** * (4.12)	-17.98*** (3.67)	-	-17.25*** (2.88)	-25.08*** (2.23)	-	-
Closeness of the Election	-0.25** (0.10)	-0.17 (0.10)	-0.37** (0.11)	-0.26** (0.10)	-0.16 (0.11)	-0.51*** (0.12)	-0.28** (0.12)
Media Effects	-8.37** (2.82)	-	-12.11*** (3.16)	-9.73*** (2.63)	-	-21.31*** (2.43)	-
Lagged Turnout	0.15 (0.12)	-0.15 (0.10)	0.44*** (0.11)	-	-	-	0.76*** (0.09)
Constant	70.05** * (9.43)	57.71*** (9.25)	47.76*** (9.12)	81.82*** (1.59)	79.30*** (1.64)	82.51*** (2.16)	19.49*** (6.21)
R-squared	0.85	0.82	0.79	0.85	0.80	0.71	0.76
Adjusted R-squared	0.84	0.80	0.77	0.83	0.78	0.69	0.69
N	45	45	45	45	45	45	45

***Significant at $p < 0.01$ (two-tailed test), **Significant at $p < 0.05$ (two-tailed test), and *Significant at $p < 0.1$. Standard errors in parenthesis. Table presents coefficients and standard error in round form for readability, though statistical significance is based off the original results.

Table 8: Variance Inflation Factors Tests of U.S. Presidential Election Voter Turnout 1840-2016

	Model 3.8b Divided Gov. (Four-Year) Full Model	Model 3.9b Divided Gov. (Four-Year) Election Law & Lagged Turnout Only	Model 3.10b Divided Gov. (Four-Year) Media & Lagged Turnout Only	Model 3.11b Divided Gov. (Four-Year) Election Law and Media Only	Model 3.12b Divided Gov. (Four-Year) Election Law Only	Model 3.13b Divided Gov. (Four-Year) Media Only	Model 3.14b Divided Gov. (Four-Year) Lagged Turnout Only
Divided Government (Four-Year)	1.15 (0.87)	1.06 (0.95)	1.12 (0.89)	1.14 (0.88)	1.05 (0.95)	1.09 (0.92)	1.05 (0.95)
Election Laws	3.84 (0.26)	3.44 (0.29)	–	2.49 (0.40)	1.15 (0.87)	–	–
Closeness of the Election	1.30 (0.77)	1.20 (0.84)	1.18 (0.85)	1.29 (0.77)	1.19 (0.84)	1.06 (0.95)	1.13 (0.88)
Media Effects	2.64 (0.38)	–	2.36 (0.42)	2.26 (0.44)	–	1.04 (0.96)	–
Lagged Turnout	3.79 (0.26)	3.24 (0.32)	2.45 (0.41)	–	–	–	1.08 (0.93)
Mean VIF	2.54	2.23	1.79	1.80	1.13	1.06	1.09

VIF presented over VIF Tolerance in parenthesis. Tolerance has been rounded for readability. Collinear VIFs in bold type.

Table 9: Linear Regressions of U.S. Midterm Election Voter Turnout 1842-2014

	Model 3.15 VEP 1840- 1994 Model	Model 3.16 Divided Gov. (Original) Full Model	Model 3.17 Divided Gov. (Original) Election Law & Lagged Turnout Only	Model 3.18 Divided Gov. (Original) Media & Lagged Turnout Only	Model 3.19 Divided Gov. (Original) Election Law Only	Model 3.20 Divided Gov. (Original) Media Only	Model 3.21 Divided Gov. (Original) Lagged Turnout Only
Divided Government (Original)	-0.27 (0.23)	-0.19 (0.24)	-0.31 (0.22)	0.31 (0.24)	-0.69** (0.24)	-0.77* (0.39)	-0.03 (0.22)
Election Laws	- 15.70*** (4.38)	-13.49** (4.16)	-14.28*** (4.13)	-	-31.50*** (2.13)	-	-
Media Effects	-	-3.58 (3.08)	-	-5.20 (3.38)	-	-28.68*** (3.38)	-
Lagged Turnout	0.48*** (0.13)	0.49*** (0.13)	0.54*** (0.12)	0.80*** (0.09)	-	-	0.92*** (0.06)
Constant	34.15*** (8.93)	34.34*** (8.89)	30.12*** (8.15)	11.92* (6.21)	67.09*** (1.67)	64.19*** (2.47)	3.66 (3.18)
R-squared	0.90	0.90	0.90	0.88	0.84	0.64	0.87
Adjusted R-squared	0.89	0.89	0.89	0.84	0.84	0.62	0.86
N	39	44	44	44	44	44	44

***Significant at $p < 0.01$ (two-tailed test), **Significant at $p < 0.05$ (two-tailed test), and *Significant at $p < 0.1$. Standard errors in parenthesis. Table presents coefficients and standard error in round form for readability, though statistical significance is based off the original results.

Table 10: Variance Inflation Factor Tests of U.S. Midterm Election Voter Turnout 1842-2014

	Model 3.15b Divided Gov. (Original) Full Model	Model 3.16b Divided Gov. (Original) Election Law & Lagged Turnout Only	Model 3.17b Divided Gov. (Original) Media & Lagged Turnout Only	Model 3.18b Divided Gov. (Original) Election Law Only	Model 3.19b Divided Gov. (Original) Media Only	Model 3.20b Divided Gov. (Original) Lagged Turnout Only
Divided Government (Original)	1.49 (0.67)	1.18 (0.85)	1.24 (0.80)	1.01 (0.99)	1.13 (0.88)	1.01 (0.99)
Election Laws	5.82 (0.17)	5.67 (0.18)	–	1.01 (0.99)	–	–
Media Effects	3.26 (0.31)	–	3.17 (0.32)	–	1.13 (0.88)	–
Lagged Turnout	6.69 (0.15)	5.67 (0.18)	2.83 (0.35)	–	–	1.01 (0.99)
Mean	4.31	4.17	2.41	1.01	1.13	1.01

VIF presented over VIF Tolerance in parenthesis. Tolerance has been rounded for readability. Collinear VIFs in bold type.

APPENDIX C: CHAPTER FOUR TABLES

Table 11: Logistic Regressions for Voter Turnout and Political Trust 1972-2016

	Model 1 Voter Turnout	Model 2 Voter Turnout	Model 3 Political Trust
Interaction	–	0.22**	–
Unified X High Trust		(0.07)	
Unified Government	-0.30*** (0.03)	-0.37*** (0.04)	-0.05 (0.03)
Trust in Gov. High	–	0.09** (0.03)	–
Age	0.26*** (0.01)	0.26*** (0.01)	0.01 (0.01)
Income	0.44*** (0.01)	0.44*** (0.01)	0.23*** (0.01)
Race White	-0.07* (0.04)	-0.11** (0.04)	2.37*** (0.06)
Gender Female	-0.03 (0.03)	-0.03 (0.03)	-0.21*** (0.02)
Education College	-0.33*** (0.05)	-0.35*** (0.05)	1.67*** (0.07)
Partisan Strength	0.46*** (0.01)	0.44*** (0.01)	0.42*** (0.01)
Constant	-2.41*** (0.07)	-2.36*** (0.07)	-4.42*** (0.08)
Chi ²	4626.64***	4656.80***	5070.59***
Pseudo R ²	0.11	0.11	0.10
Observations	33,812	33,812	39,121

Source: ANES 2018, U.S. House N.D., U.S. Senate N.D., Cronin and Genovese 2010, FEC 2013, FEC 2017.

Note: ***Significant at $p < 0.01$ (two-tailed test), **Significant at $p < 0.05$ (two-tailed test), and *Significant at $p < 0.1$. Standard errors in parenthesis. Table presents coefficients, and standard errors in rounded form for readability, though statistical significance is based off the original results. The dependent variable for Models 1 and 2 is Voter Turnout and the dependent variable for Model 3 is Trust in Government.

Table 12: Predicted Probabilities for Voter Turnout 1972-2016

Model 1 Voter Turnout	
Divided X Low Trust	0.72
Divided X High Trust	0.74
Unified X Low Trust	0.64
Unified X High Trust	0.71
Divided Government	0.73
Unified Government	0.67
Trust in Gov. Low	0.71
Trust in Gov. High	0.74
Age 17-24	0.56
Age 25-34	0.62
Age 35-44	0.68
Age 45-54	0.74
Age 55-64	0.78
Age 65-74	0.83
Age 75-99+	0.86
Income Low	0.53
Income Low-Mid	0.64
Income Middle	0.73
Income Mid-High	0.81
Income High	0.87
Race Non-White	0.74
Race White	0.71
Gender Male	0.72
Gender Female	0.72
Education High School or Less	0.73
Education College	0.65
Partisan Strength Independents	0.53
Partisan Strength Leaners	0.64
Partisan Strength Weak Partisans	0.73
Partisan Strength Strong Partisans	0.81

Source: ANES 2018, U.S. House N.D., U.S. Senate N.D., Cronin and Genovese 2010, FEC 2013, FEC 2017.

Note: Table presents predicted probabilities in rounded form for readability. The dependent variable for Models 1 is Voter Turnout.

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